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*Scientific
Intelligence
Report*

SOVIET ANTIBALLISTIC MISSILE ACTIVITY AT KAMCHATKA

OSI-SR/TCS/65-14
18 October 1965



DIRECTORATE OF SCIENCE AND TECHNOLOGY

Office of Scientific Intelligence

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Scientific Intelligence Report

**SOVIET ANTIBALLISTIC MISSILE ACTIVITY
AT KAMCHATKA**

Project Officers

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OSI-SR/TCS/65-14
18 October 1965

CENTRAL INTELLIGENCE AGENCY

Directorate of Science and Technology
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PREFACE

Although Soviet antiballistic missile (ABM) research and development is primarily conducted at the Sary Shagan Missile Test Center, there has been some speculation that such work was also being conducted in the Kamchatka impact area. In considering this possibility, a detailed study was prepared on the activities at the Kamchatka impact area. Because the study is primarily a historical compilation of these events, OSI does not intend to publish the basic study.

This report summarizes the findings of the study which relate to antiballistic missile activity. Information through December 1964 was used in compiling the detailed study; nothing has occurred since that would alter the findings. The basic study will be retained in OSI files, and a copy can be made available to persons requiring greater detail than is provided in this report.

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SOVIET ANTIBALLISTIC MISSILE ACTIVITY AT KAMCHATKA

CONCLUSIONS

1. It is almost certain that there have been no antimissile firings from the Kamchatka area. A unit that is probably associated with antimissile-related activities is located at Peschanyy,* Kamchatka, but its function is unknown.

2. Since 1959, this unit at Peschanyy has possibly been involved in collecting data on reentry observables. However, these data could be used in either ABM or ICBM research and development programs, and nothing about them points exclusively toward ABM activities.

DISCUSSION

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INTRODUCTION

On 21 August 1957, an ICBM launched from Tyuratam impacted some 3,400 nautical miles away on the Kamchatka Peninsula. This was the first of one hundred thirty-six such firings conducted through 1964. This number excludes the 33 missiles launched from Tyuratam to ranges extending beyond the nominal range to Kamchatka.¹⁻⁵

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During the course of these series of launchings to Kamchatka, [redacted]

[redacted] Islands, first detected returns from "extra objects" associated with reentries of

Soviet ICBM's in the Kamchatka area in [redacted] These returns, which supplemented the normal returns from the reentry vehicle and the tankage, had the usual characteristics of real physical targets, but the identity of such targets was then inexplicable.⁶

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This possibility has now been almost entirely negated. One reason for suspecting initially that these objects were

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not antimissile missiles was the fact that other typical indicators of an AMM launch (such as telemetry from the AMM, acoustical detection and optical observation) were all negative. Additionally, no launch sites could be identified in the area. More recently, the extra objects have been identified as fragments which resulted from the reentry breakup of Soviet ICBM sustainers, and not from any antimissile missile activities. This identification was made on the basis of

in connection with the reentry breakup of several US ICBM sustainers and observation of their resulting fragments.⁶

25X1D PROBABLE ANTIMISSILE SYSTEMS
AUTHORITY, PESCHANY

*The Antiaircraft Defense of the Country, Protivo-vozdushnaya Oborona Strany.

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Peschanyy, and probably subordinate to PVO Strany.⁷

Although considerable information on the construction phase of the Peschanyy

the probable ASA unit at Peschanyy is involved in collecting data on reentry characteristics of ICBM warheads as part of the antiballistic-missile systems research and development program, and not directly related to antimissile missile activities.

It is almost inconceivable that reentry phenomena would not be monitored on Kamchatka, the land impact area of the only ICBM test range in the Soviet Union.

KAMCHATKA TERMINAL RANGE FACILITIES

The terminal range facilities for the Tyuratam Missile Test Range (TTMTR) were first observed during a high altitude photo reconnaissance mission over Kamchatka. The terminal range includes an impact area, a communications center, and from 5 to 7 instrumentation sites. (See figure 1.) These facilities, which are sometimes referred

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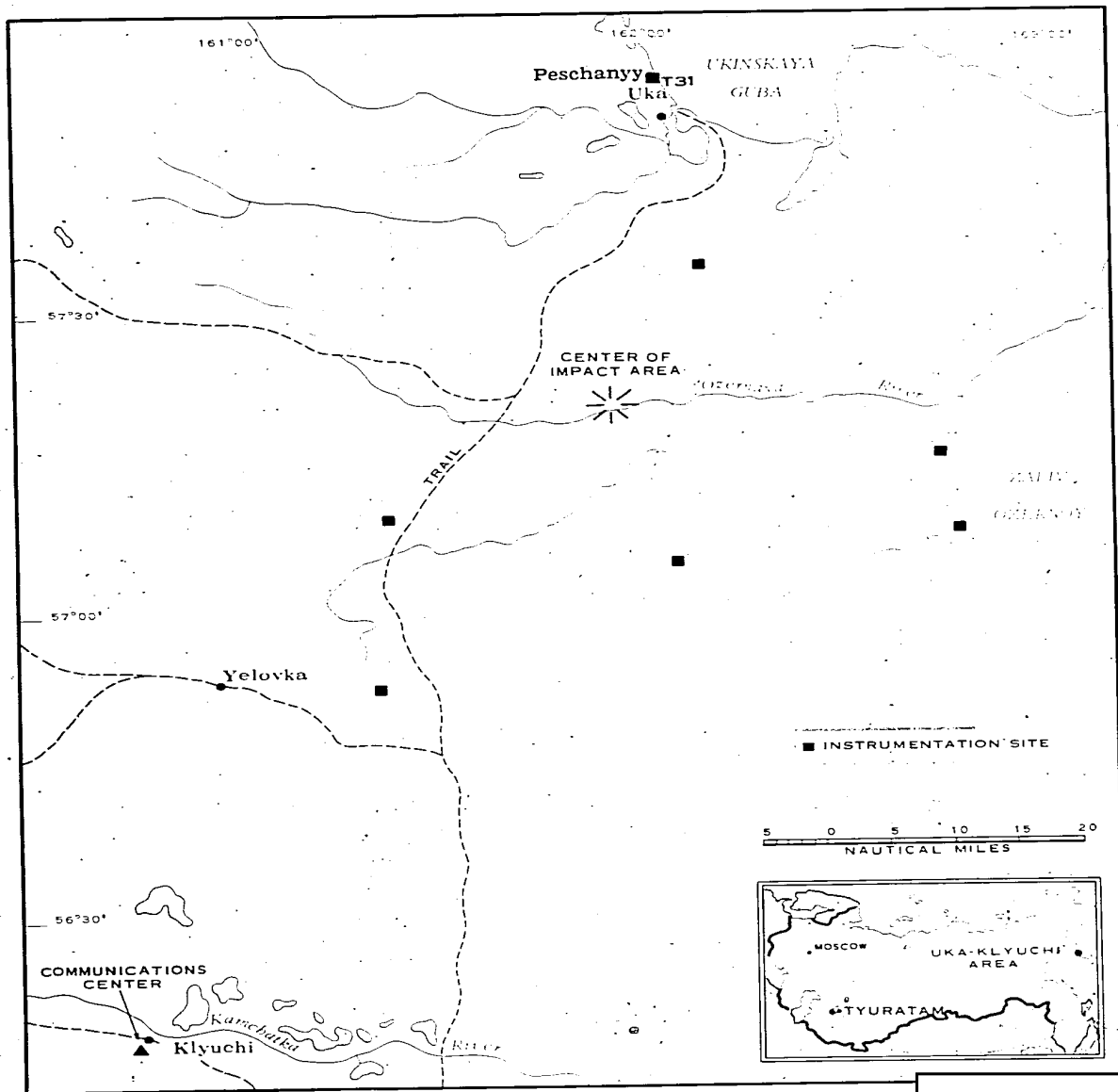


Figure 1

Locations of the Kamchatka Terminal Range Facilities

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to as the Klyuchi Complex, are used in the terminal trajectory tracking of ICBM's launched from the Tyuratam Missile Test Center (TTMTC) and possibly for ABM-related research.^{9 10} Kamchatka and TTMTR have been linked

permanent runway, a 110-foot diameter dome similar to those observed at the Sary Shagan Missile Test Center, eighty or more buildings of various types, and a 270-foot high lattice tower.⁹ By December 1963, the number of buildings near the instrumentation area had increased to more than one hundred, most of which were in the housing/support area.¹² (See figure 2.) In addition, an entire section of buildings located in the southern part of the site was probably constructed between [redacted] This section contains a housing area of approximately seventy buildings and a petroleum storage area.¹⁰ The remaining instrumentation sites are smaller and less significant than the site at Peschanyy. Only one of them has an interferometer.⁹

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25X1D MAJOR KAMCHATKA INSTRUMENTATION SITE 25X1D

25X1D The major Kamchatka instrumentation site is located at Peschanyy (57°56'N-162°01'E). This site is served by the communications installation which has been given the arbitrary designator [redacted] by the Sigint community.¹⁶ [redacted] this site included among its facilities (i) an instrumentation area and (ii) an interferometer almost identical to that at the Tyuratam Missile Test Center rangehead.^{9 10 17} A considerable build-up in logistics and construction in the Peschanyy area was noted through [redacted]

25X1D Photographs [redacted] confirmed the expansion of the facilities at Peschanyy and specifically showed the additions of an airfield with a 6,300-foot [redacted]

In addition to tracking ICBM's impacting on the Kamchatka Peninsula, the Kamchatka terminal range facilities are also responsible for tracking artificial earth satellites, Venus and lunar probes, and surface-to-surface missiles launched to an extended distance downrange from TTMTC.¹⁸ The nature of this activity lends itself readily to performing comparable tasks while participating in an ABM research and development program. Although the environs of the Kamchatka impact area have been searched thoroughly for photographic evidence of an AMM launch site, no such installation has been revealed. So long as ICBM's impact on Kamchatka, however, future firings of AMM's from this area of the Soviet Union remain a distinct possibility.

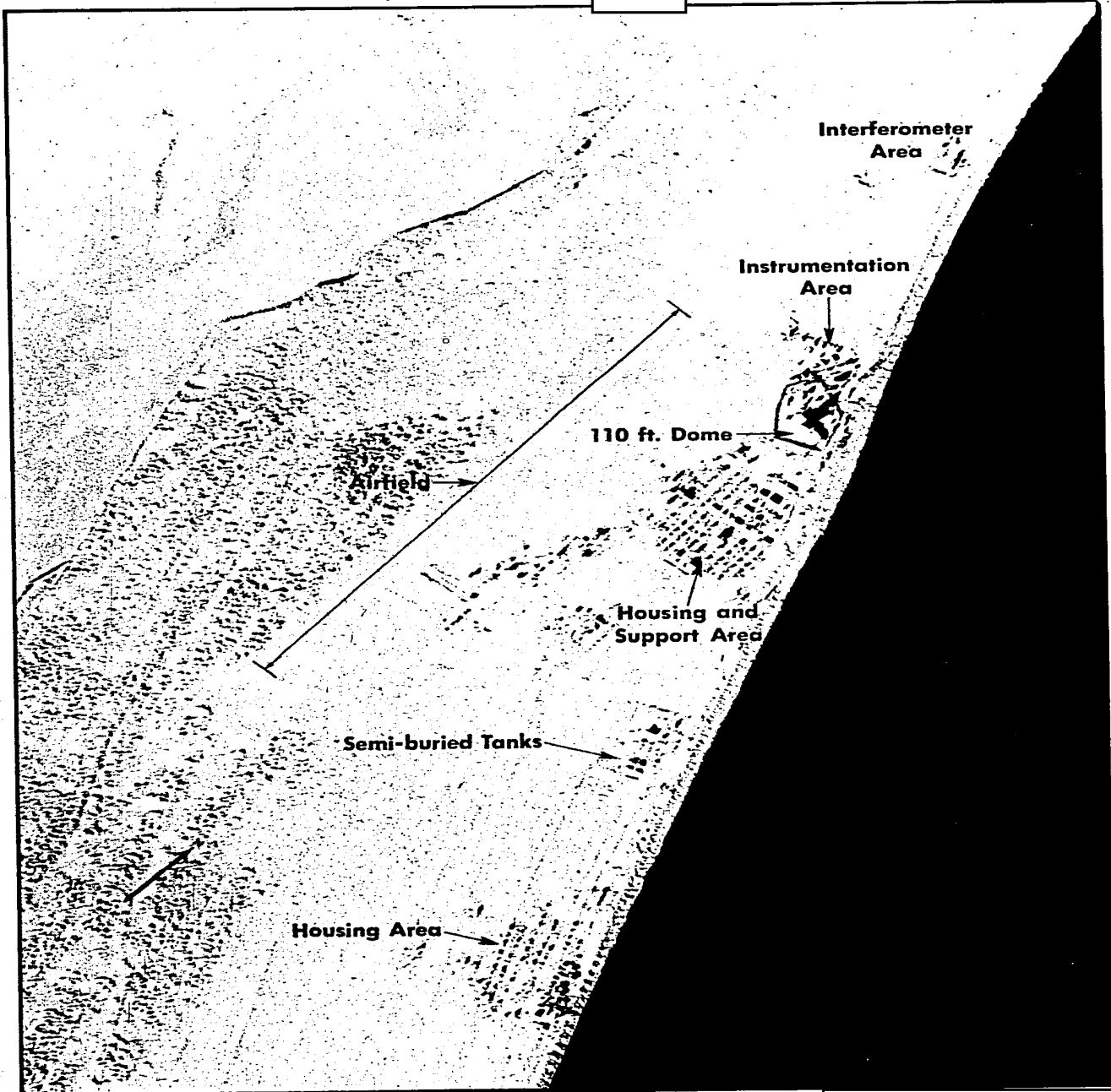
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Figure 2

Peschanyy, Kamchatka

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